REMARKS

Claims 577-600 are pending in the present Application. In view of the foregoing amendments and following remarks, Applicant respectfully requests allowance of the Application.

Amendments to the Claims

Without conceding to the Examiner's rejections and for the purpose of expediting prosecution, Applicant has canceled claims 1-6, 9, 10, 19, 20, 31, 33, 65, 66, 86, 91, 109-114, 117, 118, 121, 127, 128, 138, 139, 141, 156, 201, 202, 206, 218, 219, 221, 229, 233, 244, 549-557, 562-568, and 573-576. Applicant has added new claims 577-600.

Applicant notes that MPEP § 2163 I B provides that, "[w]hile there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through **express, implicit,** or **inherent** disclosure." (Emphasis added).

New claim 577 is supported, at least, by claim 1 as originally filed and by various portions of the specification. Particularly, "media stream," as set forth in claim 577, is supported by paragraph [0003] of the published application (U.S. Pub. No. 2007/0038999) [hereinafter "*Published Application*"][1], which states that "the invention relates to the field of arrangements that synchronize output generated by a number of output generators, including **audio output, video output, combinations of audio and video,** as well as other types of output as will be appreciated by those skilled in the art, **provided by a common channel.**" (Emphasis added). Applicant respectfully reminds the Examiner of MPEP § 2173.05(e), which provides that

> "[t]he mere fact that a term or phrase used in the claim has no antecedent basis in the specification disclosure does not mean, necessarily, that the term or phrase is indefinite. **There is no requirement that the words in the claim must match those used in the specification disclosure.** Applicants are given a great deal of latitude in how they choose to define their invention so long as the terms and phrases used define the invention with a reasonable degree of clarity and precision."

[1] All references to the *Published Application* are exemplary and are not intended to be limiting. Reference is made to the *Published Application* in order to allow the Examiner the benefit of searching the same via the HTML copy made available through the U.S. Patent and Trademark Office website.

Applicants contend that the term 'media stream' is commonly understood as a continuous sequence of audio or audio-and-video through a network.

Additionally, "tightly coupled synchrony," as set forth in claim 577, is supported by paragraph [0009] of the *Published Application*, which states that "[e]ach member of the synchrony group, using a very accurate protocol, periodically obtains the time indicated by the audio information channel device, and determines a differential between the time as indicated by its local clock and the audio information channel device's clock." Additionally, this "clock timing information ... enables the master device 21 and slave devices 22(g) of the synchrony group 20 to play the audio information **simultaneously**." *Published Application*, [0028] (emphasis added).

New claim 578 is supported, at least, by claims 6 and 75 as originally filed. Additional support may be found at paragraph [0016] of the *Published Application*, which sets forth that, in exemplary embodiments, "the network audio system 10 includes a plurality of zone players 11(1) through 11(N) ... interconnected by a local network 12, all of which operate under control of one or more user interface modules."

New claim 579 is supported, at least, by claims 6, 7, 8, 84, and 85 as originally filed, as well as paragraph [0031] of the *Published Application*, which describes that, according to exemplary embodiments, "[t]he master device 21 ... provides status information indicating the operational status of the synchrony group to the user interface module 13."

New claim 580 is supported, at least, by paragraph [0022] of the *Published Application*, which states that, in exemplary embodiments, "the synchrony groups are not fixed [such that u]sers can enable them to be established and modified dynamically."

New claim 581 is supported, at least, by paragraph [0026] of the *Published Application*, which sets forth that, according to exemplary embodiments, "a user ... may enable a zone player 11(n) that is not associated with a synchrony group, to begin playing ... audio information [and a]fter the zone player 11(n) has begun playback, or contemporaneously therewith, the user ... can enable other zone players 11(n'), 11(n''), ... to join zone player 11(n)'s synchrony group and enable that zone player 11(n) to

transmit audio information and timing information thereto ... to facilitate synchronous playback ... by the other zone players 11(n'), 11(n'') ...."

New claim 582 is supported, at least, by claims 9, 117, and 276. Claim 582 is also supported by paragraph [0022] of the *Published Application*, which states that, in accordance with exemplary embodiments, "a user may enable the zone player 11(5) to begin providing playback of the audio program provided thereto by audio information source 14(5)(2), and subsequently enable zone player 11(4) to join that synchrony group."

New claim 583 is supported, at least, by paragraph [0022] of the *Published Application*, which states that, in exemplary embodiments, "a user may enable a zone player to leave a synchrony group."

New claim 584 is supported, at least, by claims 19, 20, 127, and 128 as originally filed. Paragraph [0029] of the *Published Application* also supports claim 584 in describing exemplary embodiments in which "the zone player 11(n) that operates as the master device 21 can be migrated from one zone player 11(n) to another zone player 11(n'), which [may] be a zone player that is currently operating as a slave device 22(g) in the synchrony group."

New claim 585 is supported, at least, by paragraph [0030] of the *Published Application*, which states that "under certain circumstances, ... the zone player 11(n) that operates as the audio information channel device 23 can be migrated from one zone player to another zone player ... [f]or example, if one zone player 11(n) is operating as both the master device 21 and the audio information channel device 23 for a synchrony group 20, the master device 21 can be migrated to another zone player 11(n') while the zone player 11(n) is still operating as the audio information channel device 23."

New claim 586 is supported, at least, by claims 31, 32, 46, and 47 as originally filed. Additionally, in some embodiments, "the synchrony group member's network communications manager 40 can use one or both of the current time information and/or the playback timing information in the time stamps associated with the respective

frames 51(f) to adjust the clock rate of the clock 34 that it uses for playback." *Published Application*, [0185].

New claim 587 is supported, at least, by claim 1 as originally filed, and by paragraph [0008] of the *Published Application*, which states that "[e]ach member of the synchrony group periodically ... determines a time differential between the task distribution device's clock and its respective clock."

New claim 588 is supported, at least, by claims 10, 73, 118, and 181 as originally filed. Also, in one exemplary embodiment, "the audio information channel device 23 [may] send the zone player 11(n') frames 51(f) ... using the unicast message transmission methodology." *Published Application*, [0090].

New claim 589 is supported, at least, by claims 10, 73, 118, and 181 as originally filed, in addition to paragraph [0037] of the *Published Application*, which states that, in exemplary embodiments, "the audio information channel device 23 transmits the audio and playback timing information in messages over the network 12 using a multi-cast message transmission methodology."

New claim 590 includes similar elements to those of new claim 577. Thus, claim 590 is similarly supported by the specification as claim 577, at least, as described above.

New claim 591 includes similar elements to those of new claim 578. Thus, claim 591 is similarly supported by the specification as claim 578, at least, as described above.

New claim 592 includes similar elements to those of new claims 580 and 583. Thus, claim 592 is similarly supported by the specification as claims 580 and 583, at least, as described above.

New claim 593 includes similar elements to those of new claim 584. Thus, claim 593 is similarly supported by the specification as claim 584, at least, as described above.

New claim 594 includes similar elements to those of new claim 586. Thus, claim 594 is similarly supported by the specification as claim 586, at least, as described above.

New claim 595 is supported, at least, by paragraph [0003] of the *Published Application*, which discloses "**audio output**, video output, [and] combinations of **audio** and video." (Emphasis added).

New claim 596 is supported, at least, by paragraph [0003] of the *Published Application*, which discloses "audio output, **video output**, [and] combinations of audio and **video**." (Emphasis added).

New claim 597 is supported, at least, by claims 1 and 21 as originally filed. Additional support is found in the Abstract of the *Published Application*, which states that "[t]he task distribution device distributes each task ... associated with a time stamp that indicates a time, relative to a clock maintained by the task distribution device."

New claim 598 includes similar elements to those of new claims 588 and 589. Thus, claim 598 is similarly supported by the specification as claims 588 and 589, at least, as described above.

New claim 599 is supported, at least, by paragraph [0029] of the *Published Application*, which explains that "[t]he master device 21 ... play[s] back the audio program defined by the audio information ... [and t]he master device 21 is also the member of the synchrony group 20."

New claim 600 includes similar elements to those of new claim 577. Thus, claim 600 is similarly supported by the specification as claim 577.

Applicant reserves the right to pursue any or all of the original claims at a later time, either within the present Application or in future application(s). Applicant does not believe any new matter has been introduced by these amendments.

Rejections under 35 U.S.C. § 112

The Examiner asserts that claims 562 and 563 are rejected under 35 U.S.C § 112 ¶ 2. *Final Action*, 3. Applicant traverses. In light of the present cancellation of claims 562 and 563, the rejections thereof are obviated. As such, Applicant respectfully requests the rejections under 35 U.S.C. § 112 ¶ 2 be withdrawn.

Rejections under 35 U.S.C § 102

The Examiner asserts that claims 1-4, 31, 65, 66, 91, 109-112, 118, 121, 139, 156, 201, 202, 206, 218, 219, 221, 244, 553, 557, 562, 563, 565-568, 575, and 576 are rejected under 35 U.S.C. 102(a) as being anticipated by Jo ("Synchronized one-to-many media streaming with adaptive playout control," December 10, 2002) [hereinafter "*Jo*"]. *Final Action*, 7. Applicant traverses.

In light of the present cancellation of claims 1-4, 31, 65, 66, 91, 109-112, 118, 121, 139, 156, 201, 202, 206, 218, 219, 221, 244, 553, 557, 562, 563, 565-568, 575, and 576, the rejections thereof are obviated. As such, Applicant respectfully requests the rejections under 35 U.S.C. § 102(a) be withdrawn.

Rejections under 35 U.S.C. § 103

The Examiner asserts that claims 5, 9, 10, 20, 33, 86, 113, 114, 117, 127, 128, 141, 229, 233, 554, and 555 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jo* in view of Anjum (U.S. Pub. No. 2003/00992121) [hereinafter "*Anjum*"]. *Final Action*, 16. The Examiner also asserts that claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jo* in view of *Anjum*, and further in view of Powers (U.S. Pub. No. 2004/0203378) [hereinafter "*Powers*"]. *Final Action*, 20. In addition, the Examiner asserts that claims 138, 564, 573, and 574 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jo* in view of Miyabe (U.S. Pub. No. 2001/0032188) [hereinafter "*Miyabe*"]. *Final Action*, 21. The Examiner further asserts that claims 6, 551, and 556 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jo* in view of Tusk (U.S. Pat. No. 7,312, 785) [hereinafter "*Tusk*"]. *Final Action*, 22. Moreover, the Examiner asserts that claim 552 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jo* in view of *Anjum*, and further in view of Lo (U.S. Pat. No. 6,031,818) [hereinafter "*Lo*"]. *Final Action*, 23. Furthermore, the Examiner asserts that claims 549 and 550 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Jo* in view of Flood (U.S. Pat. No. 7,007,106) [hereinafter "*Flood*"]. *Final Action*, 24. Applicant respectfully traverses.

In light of the present cancellation of claims 5, 6, 9, 10, 19, 20, 33, 86, 113, 114, 117, 127, 128, 138, 141, 229, 233, 549-552, 554, 555, 556, 564, 573, and 574, the rejections thereof are obviated. As such, Applicant respectfully requests the rejections under 35 U.S.C. § 103(a) be withdrawn.

Points of Distinction with Respect to the *Jo* Reference

1. *Jo* teaches time-scale modification.

Jo is directed to media streaming with adaptive playout control using "time-scale modification." *Jo*, § 2.2 Heading, see also Title. More specifically, Jo teaches that "[b]ased on the timing and buffering status, the scheduler controls the adaptive playout by *expanding/contracting* the playout both at the compositor and decoder." *Jo*, § 2.2 ¶ 1 (emphasis in original).

In contrast, the presently claimed subject matter includes "determining a time differential between the independent clock associated with the source device and one or more independent clocks associated with one or more playback devices based on the source-clock information ... and outputting the media stream in ... synchrony **based on the time differential**," as set forth in claim 577. (Emphasis added).

2. *Jo* teaches lightly coupled synchronization.

Jo explains that "in this paper, we are talking about lightly coupled synchronization, where the server and clients need to be **synchronized within an allowed range**." *Jo*, § 2.4 ¶ 1 (emphasis added). This is further emphasized in Table 2 of *Jo*, which is reproduced below.

Table 2. Impact of T_s arbitration policy on the performance.

T_s selection	Discontinuity(s)	Playout speed variation(f/s)
Minimum	0.4812	2.8345
Median	0.5562	2.5396
Maximum	0.5812	2.3805
Average	0.4870	2.8291

The statistics displayed in Table 2 of *Jo* demonstrate that the so-called synchronization between the server and clients contains discontinuities as well as playout speed

variation. Furthermore, it is pointed out that, "[g]enerally, the audio playback devices that are being developed have independent clocks, and, if they are not clocking at precisely the same rate, the audio playback provided by the various devices can get out of synchronization." *Published Application*, [0006]. In new claim 577, however, "outputting the media stream in tight synchrony with the one or more playback devices" is set forth.

3. *Jo* lacks a global time reference.

Jo states that, "[i]n this paper, we assume that globally synchronized time reference is not available." *Jo*, § 2.3 ¶ 2. According to new claim 577, contrastingly, "the media stream compris[es] source-clock information related to an independent clock associated with the source device." Without a global time reference, such as the source-clock information set forth in new claim 577, Applicant believes one or more other elements of claim 577 to be impossible for *Jo* to perform, particularly, "determining a time differential between the independent clock associated with the source device and one or more independent clocks associated with one or more playback devices based on the source-clock information."

Based at least on the remarks herein, Applicant believes that independent claim 577 is patentable over the previously cited references. Additionally, as independent claims 590 and 600 include similar elements to those of independent claim 577, claims 590 and 600 are likewise patentable for at least the same reasons. Furthermore, as a dependent claim incorporates by reference all the limitations of the claim from which it depends (see 35 U.S.C. § 112, ¶ 4), claims 578-589 and 591-599 are allowable for at least the same reasons as the independent claim from which they depend.

CONCLUSION

Based on the foregoing remarks, Applicant believes the rejections to the claims have been overcome, and that the present application is in condition for allowance. The Examiner is invited to contact Applicant's undersigned representative with any questions concerning this matter.

Respectfully submitted,
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